Appendix E

Field SOPs

CHAIN-OF-CUSTODY PROCEDURES

1.0 PURPOSE

Chain-of-custody procedures are established to provide sample integrity. Sample custody protocols will be based on procedures as described in "NEIC Policies and Procedures", EPA-330/9-78-DD1-R, Revised June, 1985. This custody is in two parts: sample collection and laboratory analysis. A sample is under a person's custody if it meets the following requirements:

- It is in the person's possession;
- It is in the person's view, after being in the person's possession;
- It was in the person's possession and it was placed in a secured location; or
- It is in a designated secure area.

All samples submitted to a laboratory shall be accompanied by a properly completed Chain of Custody form.

2.0 FIELD SPECIFIC CUSTODY PROCEDURES

The sample packaging and shipment procedures summarized below will assure that the samples will arrive at the laboratory with the chain-of-custody intact.

Field procedures are as follows:

(a) The field sampler is personally responsible for the care and custody of the samples until they are transferred or properly dispatched. As few people as possible should handle the samples.

(b) All bottles should be tagged with sample numbers and locations.

(c) Sample tags should be filled out using waterproof ink for each sample.

(d) The Project Manager should review all field activities to determine whether proper custody procedures were followed during the field work and decide if additional samples are required.

Transfer of Custody and Shipment Procedures are as follows:

(a) Samples should be accompanied by a properly completed chain-of-custody form. The sample numbers, locations, media, time of collection, preservative and required analyses will be listed on the chain-of-custody form. When transferring the possession of samples, the individuals relinquishing and receiving will sign, date, and note the time on the record. This record documents transfer of custody of samples from the sampler to another person, to a mobile laboratory, to the permanent laboratory, or to/from a secure storage area.

(b) Samples will be properly packaged for shipment and dispatched to the appropriate laboratory for analysis with a separate signed custody record enclosed in each sample box or cooler. Shipping containers will be locked and/or secured with strapping tape in at least two locations for shipment to the laboratory.

(c) Whenever samples are split with a source or government agency, a separate Sample Receipt is prepared for those samples and marked to indicate with whom the samples are being split. The person relinquishing the samples to the facility or agency should request the representative's signature acknowledging sample receipt. If the representative is unavailable or refuses, this is noted in the "Received By" space.

(d) All shipments will be accompanied by the Chain-of-Custody record identifying the contents. The original record will accompany the shipment, and the pink and yellow copies will be retained by the sampler for returning to the sample office.

(e) If the samples are sent by common carrier, a bill of lading should be used. Receipts of bills of lading will be retained as part of the permanent documentation. If sent by mail, the package will be registered with return receipt requested. Commercial carriers are not required to sign off on the custody form as long as the custody forms are sealed inside the sample cooler.

The Chain of Custody records will be kept with the analytical laboratory reports in the project master file.

Natural Resource Technology
N R T

CHAIN OF CUSTODY RECORD

Sample Collectors(s)/Signature(s)	**NATURAL RESOURCE TECHNOLOGY, INC.** **PEWAUKEE, WISCONSIN**	Laboratory Samples are Being Submitted To: _____ Quote Number/Addendum Number _____ Attached: YES __ NO __
Site Name: _____ Site Address: _____ _____	Send Report To: Project Manager: _____ Project Number: _____ Natural Resource Technology, Inc. 23713 W. Paul Road Task Number: _____ Pewaukee, WI 53072 Telephone (262) 523-9000 Fax (262) 523-9001	Temperature of temperature blank _____ If sample(s) were received on ice and there was ice remaining, you may report the temperature as "received on ice". If all of the ice was melted, the temperature of the melt may be substituted for a temperature blank.

I hereby certify that I received, properly handled, and maintained custody of these samples as noted below:

Relinquished By (Signature)	Date/Time	Received By (Signature)	Date/Time
Relinquished By (Signature)	Date/Time	Received By (Signature)	Date/Time
Relinquished By (Signature)	Date/Time	Received By (Signature)	Date/Time

Field ID Number	Date Collected	Time Collected	Sample		Location / Description	PID Reading	Field Comments	Preserv. Type	# of Cont.	Analytical Method / Numbers	Lab Use Only
			Media	Device						Lab ID Number	Sample Conditions @ Laboratory

SPECIAL INSTRUCTIONS

Laboratory shall retain samples for 30 days after issuing Analytical report unless indicated otherwise below:
___ Return ___ Other _____

PT 1 - ORIGINAL-WHITE PT 2 - LABORATORY COPY-YELLOW PT 3 - NRT FIELD COPY-PINK

This form is based on the WDNR LUST Program Chain of Custody Record (Form 4400-151)

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Survey Log

Appendix E includes a Survey Log, which is only available in the hardcopy format of this document.

Core Log Sheet

Core ID	-	Project	
Date		Time	
Calibration Number		Initials	
Comments			

Section Number	Section Length (cm)	Sediment Length (cm)	Logged	Section Comments
1			☐	
2			☐	
3			☐	
4			☐	
5			☐	
6			☐	
7			☐	
8			☐	
9			☐	
10			☐	

Appendix F

EDD Format

Location EDD

Field Name	Field Type [max # of characters]	Required Field	Example
loc_name	Text [20]	Yes	715001
area	Text [50]	Yes	LLBDM
deposit	Text [50]	Yes	Non-Dep
X_coord	Double	Yes	623163.688394
Y_coord	Double	Yes	396878.86425
surf_elev	Double	Yes	18.2
elev_unit	Text [15]	Yes	feet
observation_date	Date	No	
horz_collect_method_code	Text [2]	Yes	GPS
elev_collect_method_code	Text [2]	Yes	GPS
elev_datum_code	Text [1]	Yes	NAD 83
subcontractor_name_code	Text [10]	Yes	RETEC
loc_desc	Text [70]	No	
loc_type	Text [10]	No	
loc_purpose	Text [20]	No	
remark	Text [2550]	No	
tube_length	Double	For sediment cores only	
water_depth	Double	For sediment cores only	
penetration_depth	Double	For sediment cores only	
recovered_depth	Double	For sediment cores only	
process_date	Date	For sediment cores only	

Sample EDD

Field Name	Field Type [max # of characters]	Required Field	Example
sample_name	Text [30]	Yes	715001-1
sample_matrix_code	Text [10]	Yes	TI
sample_type_code	Text [10]	Yes	N
parent_sample_code	Text [20]	For field duplicate sample	
sample_date	Date	Yes	4/29/98
sample_time	Time	Yes	0:00
loc_name	Text [20]	Yes	715001
start_depth	Double	For sediment cores only	
end_depth	Double	For sediment cores only	
depth_unit	Text [15]	For sediment cores only	
chain_of_custody	Text [15]	No	
sent_to_lab_date	Date	No	
sample_receipt_date	Date	No	9/17/98
sampler	Text [30]	No	Amrheim
sampling_company_code	Text [30]	Yes	RETEC
sampling_technique	Text [40]	No	
task_code	Text [20]	Yes	98RETECRI/FSSupp
composite_yn	Text [1]	Yes	N
composite_desc	Text [255]	For composite_yn = "Yes"	
comment	Text [255]	No	
common_name	Text [50]	For Tissue samples	Walleye
specimen_type	Text [50]	For Tissue samples	whole fish

Result EDD

Field Name	Field Type [max # of characters]	Required Field	Example
sample_name	Text [30]	Yes	715001-1
lab_anl_method_name	Text [35]	Yes	P/P
analysis_date	Date	Yes	10/7/98
analysis_time	Time	Yes	0:00
total_or_dissolved	Text [1]	For Water Samples	N
column_number	Text [2]	No	
test_type	Text [10]	Yes	initial
lab_matrix_code	Text [10]	Yes	TI
analysis_location	Text [2]	Yes	FI
basis	Text [10]	Yes	Dry
container_id	Text [30]	No	
dilution_factor	Single	Yes	1
prep_method	Text [35]	No	
prep_date	Date	No	10/7/98
prep_time	Time	No	0:00
leachate_method	Text [15]	No	
leachate_date	Date	No	
leachate_time	Time	No	0:00
lab_name_code	Text [30]	Yes	SVT
qc_level	Text [10]	Yes	
lab_sample_id	Text [20]	Yes	367996
percent_moisture	Text [5]	For Sediment samples	
analyst_name	Text [30]	No	
instrument_id	Text [50]	No	
comment	Text [255]	No	
preservative	Text [50]	No	
cas_rn	Text [15]	Yes	309-00-2
chemical_name	Text [60]	Yes	Aldrin
result_value	Text [20]	Yes	2.4
result_error_delta	Text [20]	No	
result_type_code	Text [10]	Yes	TRG
reportable_result	Text [10]	Yes	Yes
detect_flag	Text [2]	Yes	N
lab_qualifiers	Text [7]	Yes	U
validator_qualifiers	Text [7]	Yes	U
method_detection_limit	Text [20]	Yes	2.4
reporting_detection_limit	Text [20]	Yes	2.4
quantitation_limit	Text [20]	Yes	2.4
result_unit	Text [15]	Yes	ug/kg
result_comment	Text [255]	No	